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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,093	12/04/2001	Jeong-Min Moon	041501-5470	8028

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EXAMINER
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LEE, GUIYOUNG

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/000,093

Applicant(s)

MOON, JEONG-MIN

Examiner

Guiyoung Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Receipt is acknowledged of the Amendment filed 1-28-2004.

#### ***Allowable Subject Matter***

2. The indicated allowability of claims 18-21 is withdrawn in view of the newly discovered reference(s) to Lee (US 2002/0044437 A1). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winsor (USPT 5,914,560) in view of Lee (US 2002/0044437).

Re claims 1 and 23: Winsor discloses a flat type fluorescent lamp having first and second substrates (116 and 104 in Fig. 3A); a light-emitting layer (164) disposed between the first and second substrates; a plurality of supporters (183 in Fig. 3A) selectively arranged on the first substrate; and a light-scattering layer (186 in Fig. 3A) placed adjacent the plurality of supporters, wherein the light-scattering layer is spaced a distance from the first substrate (116), and wherein the light emitting layer is fluorescent (164). Winsor does not disclose that the supporters are arranged on an entire surface of the first substrate. However, Lee teaches that a plurality of supporters (60 in Fig. 2) is arranged on an entire surface (See fig. 2). It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute Lee's supporters

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with Winsor's supporters in order to prevent the light-scattering layer from dropping down from its own weight and to prevent foreign materials or scratches from occurring on the contact area of the light-scattering layer (Paragraph 39).

Re claim 2: Winsor discloses a reflecting portion adjacent a lower portion of the second substrate (202 in Fig. 9).

Re claims 3-4: Winsor discloses that the supporters are formed of a transparent material having characteristic for scattering light (col. 8, lines 45-48).

Re claim 5: Winsor discloses that the supporters are column-shaped having an upper and lower surface with a given surface area (See 183 in Fig. 3B).

Re claims 18-21: Lee teaches that a cap is attached to the upper portion of the supporters.

Further, Lee teaches that the cap is formed from a soft material (Fig. 4-5 and Paragraph 39).

Re claim 22: Winsor discloses that the supporters are formed separately from the first substrate (183 in Fig. 3A).

5. Claims 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winsor as applied to claim 1 above, and further in view of Ge et al. (USPT 5,859,508), Lowe (USPT 5,561,343) and Anderson et al. (USPT 5,811,927). The teachings of Winsor have been discussed above.

Re claims 6-17: Winsor does not disclose various types of supporters including a cylindrical shape, a polygonal shape, or a spherical shape as set forth in the claims 6-17. However, Lowe teaches a cylindrical-shaped supporter (Fig. 3A) and a polygonal-shaped supporter (Fig. 3B).

Further, Anderson discloses that the upper surface of a supporter has a spherical shape (169 in Fig. 9). It would have been an obvious matter of design choice to employ various types of

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supporter as suggested by Ge, Lowe, and Anderson below, since applicant has not disclosed that such shapes of supporters solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with Winsor's supporter.

Re claim 6: Ge discloses that the surface area of the upper surface of the supporter is different than the surface area of the lower surface (502a in Fig. 6).

Re claims 7-9 and 13-14: Lowe discloses a cylindrical shaped supporter that the surface area of the upper surface is substantially equal to the surface area of the lower surface (Fig. 3A). Further, Lowe discloses a polygonal poles shaped supporter (Fig. 3B).

Re claims 10-11 and 16: Ge discloses a supporter that the lower surface is a cylindrical shape and that the upper surface is substantially curved (502 in Fig. 5a).

Re claims 12, 15, and 17: Anderson discloses a supporter having a spherical shaped upper surface (212 in Fig. 13).

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guiyoung Lee whose telephone number is 571-272-2374. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LGY



**ALAN CARIASO**  
**PRIMARY EXAMINER**